

[c]

compasses

the architecture & interior design international magazine | middle east

CONNECTIONS JOINING LANDS AND PEOPLE

BIG: Bjarke Ingels Group
Zaha Hadid Architects
Jean-François Klein
& Michel Virlogeux
Santiago Calatrava
Stefano Barattini
AGi Architects

Focus: bridging & linking
continents and cities
HYPE Abu Dhabi-Dubai
Bosphorus, Doha
Napoli Afragola

Urko Sánchez Architects
Garcés-de Seta-Bonet
Beyer Blinder Belle
& Lubrano Ciavarra
Belsize Architects
Luís Pedro Silva
Studio KO





[c]

compasses

the architecture & interior design international magazine | middle east

Publisher Board

Marco Ferretti
Francesca Maderna

Scientific Director

Andrea Pane
director@compassesworld.com

Scientific Committee

David Chipperfield
Odile Decq
Massimiliano Fuksas
Hans Ibelings
Farida Kamber Al Awadhi
William Menking
Italo Rota
Livio Sacchi
Yehuda Safran
Karl T. Ulrich

Editorial Staff

Giovanna Russo Krauss
Damiana Treccozi
staff@compassesworld.com

Editorial Board

Paola Ascione
Francesca Capano
Maria Vittoria Capitanucci
Paolo Giardiello
Serkan Gunay
Achraf Ibrahim
Massimo Imparato
Ferruccio Izzo
Laura Lieto
Giovanni Menna
Linda Nubani
Ivan Parati
Gennaro Postiglione
Titti Rinaldi
Saud Sharaf

Art Director

Ferdinando Polverino De Laureto

Team and Publishing Coordinator

Andrea Del Gaudio
media@compassesworld.com

Associate Editor Middle East

Ivan Parati

Correspondents

Brazil Ana Carolina de Souza Bierrenbach
Beatriz Mugayar Kühl
Nivaldo Vieira de Andrade
Massimiliano Campi
China Annamaria Giangrasso
Emirates Laurence Bassières
France Nicolas Detry
Claudia Tamburro
India Ingrid Paoletti
Japan Matteo Belfiore
Kuwait Sikander Khan
Morocco Laurence Bassières
New Zealand Alberto Calderoni
Palestine Cristina Bronzino
Portugal Teresa Ferreira
Spain Federico Calabrese
Camilla Mileto
Fernando Vegas
Serkan Gunay
Pietro Belli
Michele Pasca di Magliano
Randall Mason
Linda Nubani

Turkey

UK

USA

Text Review

Rania Shalabi
Neal Putt

Photographer

Sharif Nazal
Sandra Zarneshan

Advertising Sales Director

Luca Mollamo

Advertising Sales Agency

Agicom Srl
Viale Caduti in Guerra, 28
00060 Castelnuovo di Porto (RM)
Media & Advertising
Mobile UAE : + 971 567890149
Mobile Italy : + 39 3358225239
Phone Italy + 39 069078285
agicom@agicom.it
Skype: agicom.advertising

SUBSCRIPTIONS

To subscribe
please send your contacts
by e-mail to
media@compassesworld.com

Decree of the Court of Naples
n. 58 / 20-12-2016

Cover Image

Courtesy of
© Michel Denancé by ICA

Publisher

e.built Srl - Italy
Via Francesco Crispi 19-23
80121 Napoli
phone +39 081 2482298
fax +39 081 661014
mobile +39 335 5889237

Gulf Countries Representative

Build LLC
Souk Al Bahar
Old Town Island Burj Khalifa District
Dubai - UAE

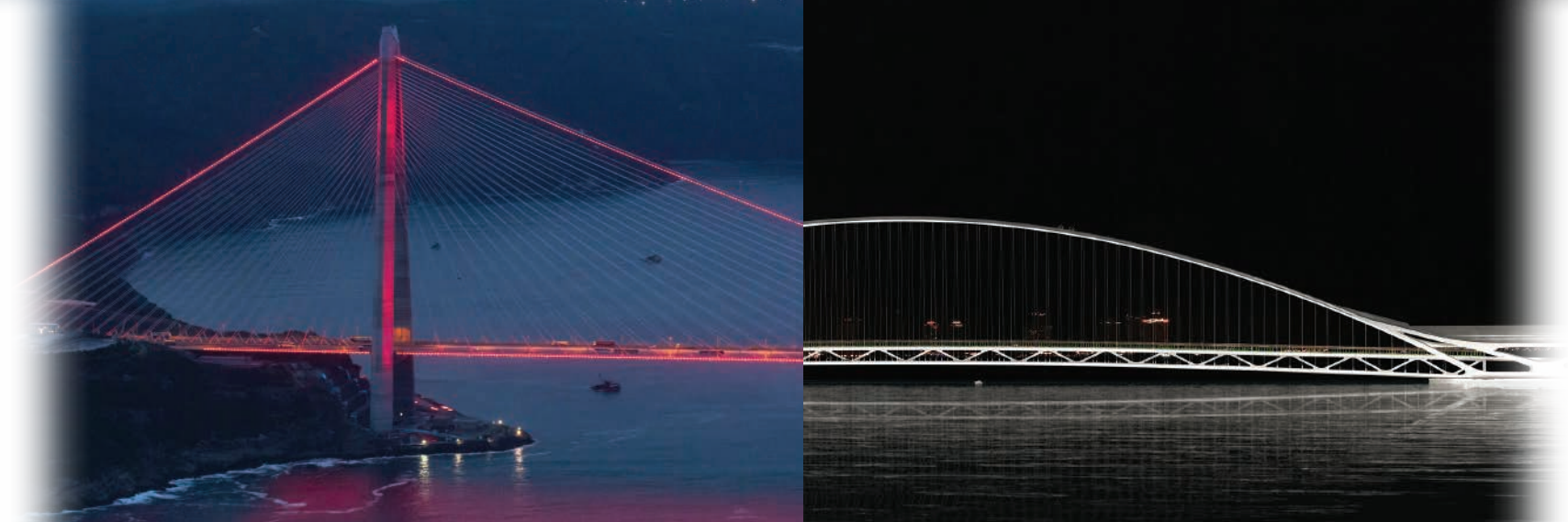
[compasses] is a supporting member of



Compasses n.26 - 2017
Printed in Italy
by Rossi Srl
Nola (Napoli)

November 2017
ISSN NUMBER: 2409-3823

The publishers regret that they cannot accept liability for error or omissions contained in this publication, however caused. The opinions and views contained in this publication are not necessarily those of the publishers. Readers are advised to seek specialist advice before acting on information contained in this publication, which is provided for general use and may not be appropriate for the reader's particular circumstances. The ownership of trademarks is acknowledged. No part of this publication or any part of the contents thereof may be reproduced, stored in retrieval system or transmitted in any form with - out the permission of the publishers in writing.



026 JOINING LANDS AND PEOPLE

[editorial]

e

22 Connecting architecture - Andrea Pane

[essays]

es

25 Great expectations: the Moscow metro for the Soviet utopia - Federica Deo
31 Archigram city(e)scapes - Pietro Belli
37 Dubai Creek: from commercial dock to strategic urban infrastructure - Cristiano Luchetti
43 Mediterranean Bridging: TUNelT and GRALBeIT - Enzo Siviero, Viviana Martini

[focus]

f

50 A hybrid dream: the Yavuz Sultan Selim Bridge on the Bosphorus - Maria Vittoria Capitanucci
58 Bridging to the future: Doha's Sharq Crossing - Damiana Treccozi
64 The Snake. A high speed rail station in Napoli Afragola - Giovanni Menna
72 HYPE Hyperloop One. A new Era of abstract cities? - Anna Cornaro

[architecture & plan]

ap

78 Like a sea creature luring you in the sea: Porto Cruise Terminal - Giovanna Russo Krauss
86 Archaeology of the present: three stations of Line 9 of Barcelona's Metro - Ana Carolina Bierrenbach, Federico Calabrese
94 From passengers to guests: TWA hotel at JFK Airport - Giovanna Russo Krauss

[experiences]

ex

102 Inside out, outside in: the Three Gardens House in Kuwait - Damiana Treccozi
108 Musée Yves Saint Laurent Marrakech: haute couture and the city - Cristina Bronzino
116 Learning from the past to build sustainable architecture: the Tudor Apartments - Jenine Principe
122 Klippan House. Far from the madding (London) crowd - Pietro Belli

[materials & interiors]

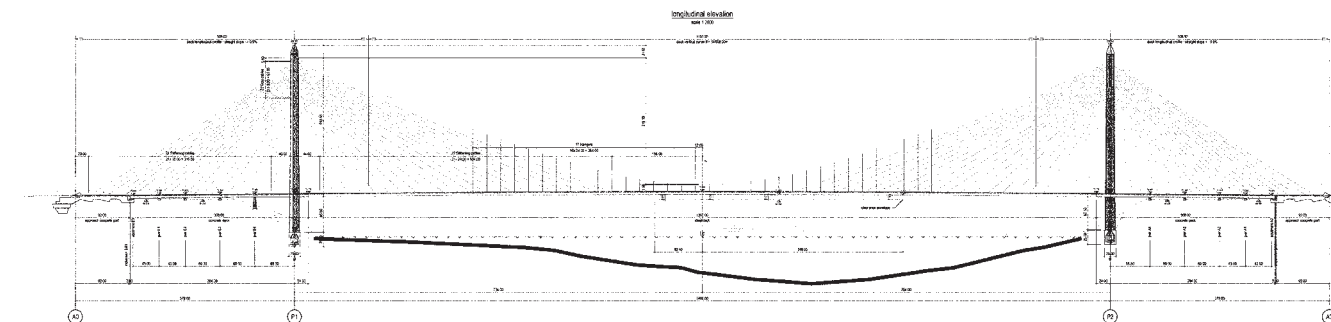
mi

128 Factories of memory - Florian Castiglione
134 The "Majesty" floating palace. A boundless extension of a luxurious private space - Alessandro Cece

[smart food]

sf

140 Connecting sight and taste: pure pleasure - Ferdinando Polverino De Laureto



Hopefully in time for the 2022 World Cup, Qatar's capital and largest city, Doha, is soon going to be marked by Santiago Calatrava's Sharq Crossing Masterplan, formerly known as Doha Bay Crossing. The project was requested by the Ministry of Municipal Affairs and Urban Planning (MMUP) and developed by this worldwide renowned and award-winning Spanish architect and engineer back in 2011 and is currently underway. Connecting by sea three of the city's major districts including the Airport area, the West Bay Financial District and the Cultural City, this astounding project is going to lend the bay a distinct character and a strongly recognizable landmark.

Doha lies on the east coast of the Qatar Peninsula, surrounded by plain desert scattered by only a few minor settlements. This capital city hosts over 60% of the Qatari residents, having more than a million inhabitants, and is increasingly growing since the beginning of the 21st century. Back in the 1970s, great dredging operations were carried out, finally equipping the city with a deep-water port. In fact, originally only small ships could access it, due to Doha's shallow waters and coral reef standing between the city's waterfront and the Persian Gulf. On that occasion, the Doha Corniche was accomplished too. This promenade embraces the whole bay, running along the coast from its southern to its northern shore, and connects the city's main neighborhoods. Among these stands the West Bay Financial District, probably its most famous, displaying tall skyscrapers and designing Doha's now well-known skyline. Further north is located the Katara Cultural Village, inaugurated in 2010, and finally there is the airport area, where, since 2014 the Hamad International Airport has replaced the former Doha International as Qatar's principal airport.

In addition to the preexisting highways, Calatrava's Sharq Crossing Masterplan >

Bridging to the future: Doha's Sharq Crossing



Santiago Calatrava

Work

The Sharq crossing

Client

Ministry of Municipality and Urban Planning (MMUP)

Location

Doha, Qatar

Project Year

2013-current

Architecture and Design

Santiago Calatrava – Architects & Engineers

Architect

Santiago Calatrava

Engineering

Santiago Calatrava – Architects & Engineers

Size and total area

Over 10 km

Image credits

Courtesy of Santiago Calatrava

will offer a major traffic connection to the city, linking Hamad International Airport, West Bay Financial District and Katara by sea. The formerly proposed only tunnel system was substituted by Calatrava with a new system entailing three cut-and-cover tunnels, two subsea tunnels and three bridges, combining refined engineering solutions with a captivating and unique design. Once completed, this huge project will boast some interesting records, including the first subsea tunnel project in the Middle East and the world's largest arch span bridge connecting the shore to an underground interchange, that is the Marine Interchange.

After all, Calatrava is a real bridge expert, having constructed over thirty masterpieces in bridge design all over the world to this day. In the 1980s he began in Spain, where he constructed bridges in Barcelona, Valencia, Seville and in many others. In the early 1990s, he conquered Europe after designing his first bridge outside his native land, at first in Manchester, then in Berlin, Dublin, Athens and so on. Since the late 1990s he finally approached non-European territories, such as Canada, Argentina, Israel and U.S.A.. Despite this amazing crescendo to success, he still had not broadened to the Persian Gulf when the Sharq Crossing was entrusted to him in 2013.

Doha's Masterplan features three bridges which are «individual sculptural pieces with distinct character drawing on the constraints of the adjacent urban environment»¹. Their winding elevation profile is their most interesting aspect. From the mainland level, the cut-and-cover tunnels lead offshore, where the bridges gently arise above sea level and then descend, disappearing beneath the water connecting to the main underwater tunnel. Thanks to the underground traffic structures, the coastline is never intruded nor the city intersected by further roadway alignments, thus preserving the pedestrian and vehicular continuity and visual unity of Doha's districts.

Every single bridge displays a very unique iconic design, representing a singular interpretation of Calatrava's flair for biomorphic shapes. Whether resembling a human spine or animal ribcages, all his structures somehow derive from the emulation of nature's essential design: every element is necessary and every shape is harmonic.

The West Bay Bridge, named after the area it serves, looks like an arched and stringed backbone ending in round-tipped shells providing a shaded canopy for railway users. This captivating tied-arch



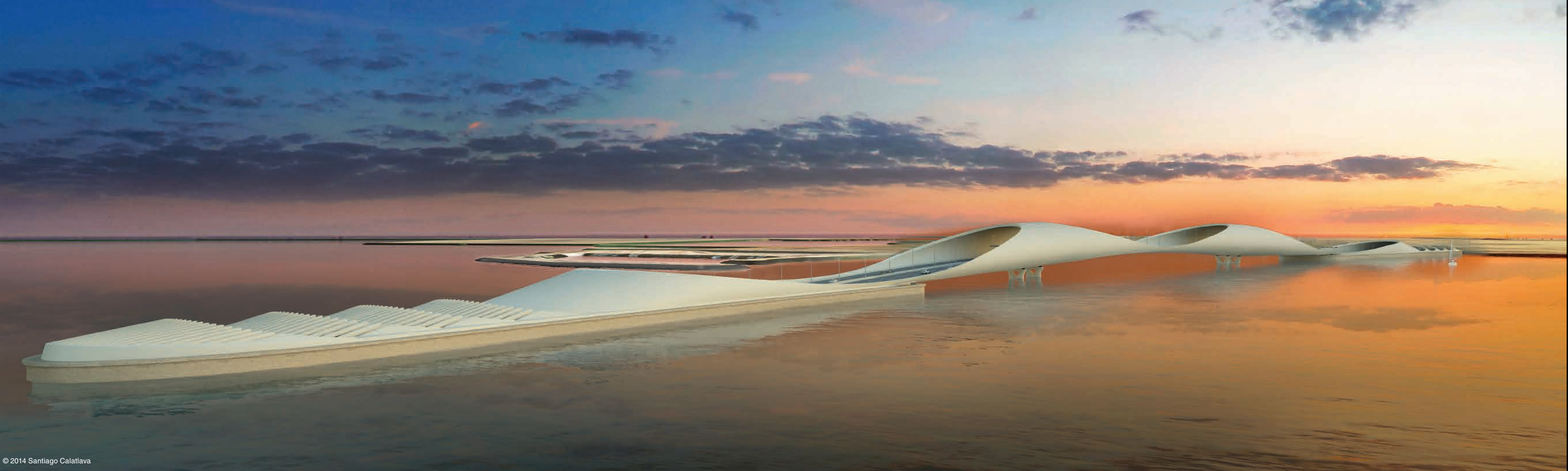
© 2014 Santiago Calatrava Photo by Maher Attar



© 2014 Santiago Calatrava

bridge structure is not only designed for vehicle traffic, but also for pedestrians. While on the lowest level lies the roadway, on a higher level, parallel to it, runs an elevated walkway conceptually and physically extending Corniche Park, which was also proposed within the masterplan as a green extension of the present-day Corniche. Furthermore, over the pedestrian walkway and just along the bridge's arch, is a Funicular cableway transporting people from one end to the other while offering stunning views over the city, at 125 meters above the sea level. After reaching the final edge of the bridge, people continue to move all the way through the Sharq Crossing on futuristic public transportation. At the West Bay Bridge's end is an artificial island structure where different terraced levels offer various recreational activities and belvederes overlooking the southern part of the Persian Gulf. These may be reached also by sea, being the island equipped with a small craft marina. Far from being only a leisure destination, this terminal island actually works as a bridge abutment and transport interchange. The elevated level of the West Bay Bridge's roadway, in fact, uses its length to achieve a vertical grade transition to reach the interchange below the sea bed. This expedient prevents the undersea tunnel the bridge reconnects to, from intercepting another tunnel going north towards Cultural City and Lusail. Further north, the Cultural City Bridge leading to Katara is made up of a series of cable-stayed bridges altogether constituting a long connection which allows to shorten the submerged tunnel total length. This second bridge definitely represents more clearly than others Calatrava's aim at «minimizing the impact on the bay environment by designing bridges with a minimum number of supports»². Thus, this purpose also justifies this architect/engineer's decision to submerge most of the roadways in order to avoid massive structures – which the long distance over the sea would have required – invading the whole bay. Finally, on the southern part of the bay, close to Doha's new airport, lies the Al Sharq Bridge. This tube-like structure positioned on the water surface, offers enchanting views of the whole city through wide oblique cuts interrupting its tubular shape. Vehicles and people circulating beneath the sea, biomorphic bridges arising from the ocean, sculptural structures designing this new city's iconic landmarks; Calatrava's Sharq Crossing definitely bridges Doha to the future.

Damiana Treccoizzi



© 2014 Santiago Calatrava



© 2014 Santiago Calatrava



© 2014 Santiago Calatrava

Notes

- 1 Santiago Calatrava - Architects & Engineers project profile.
- 2 Santiago Calatrava - Architects & Engineers project profile.